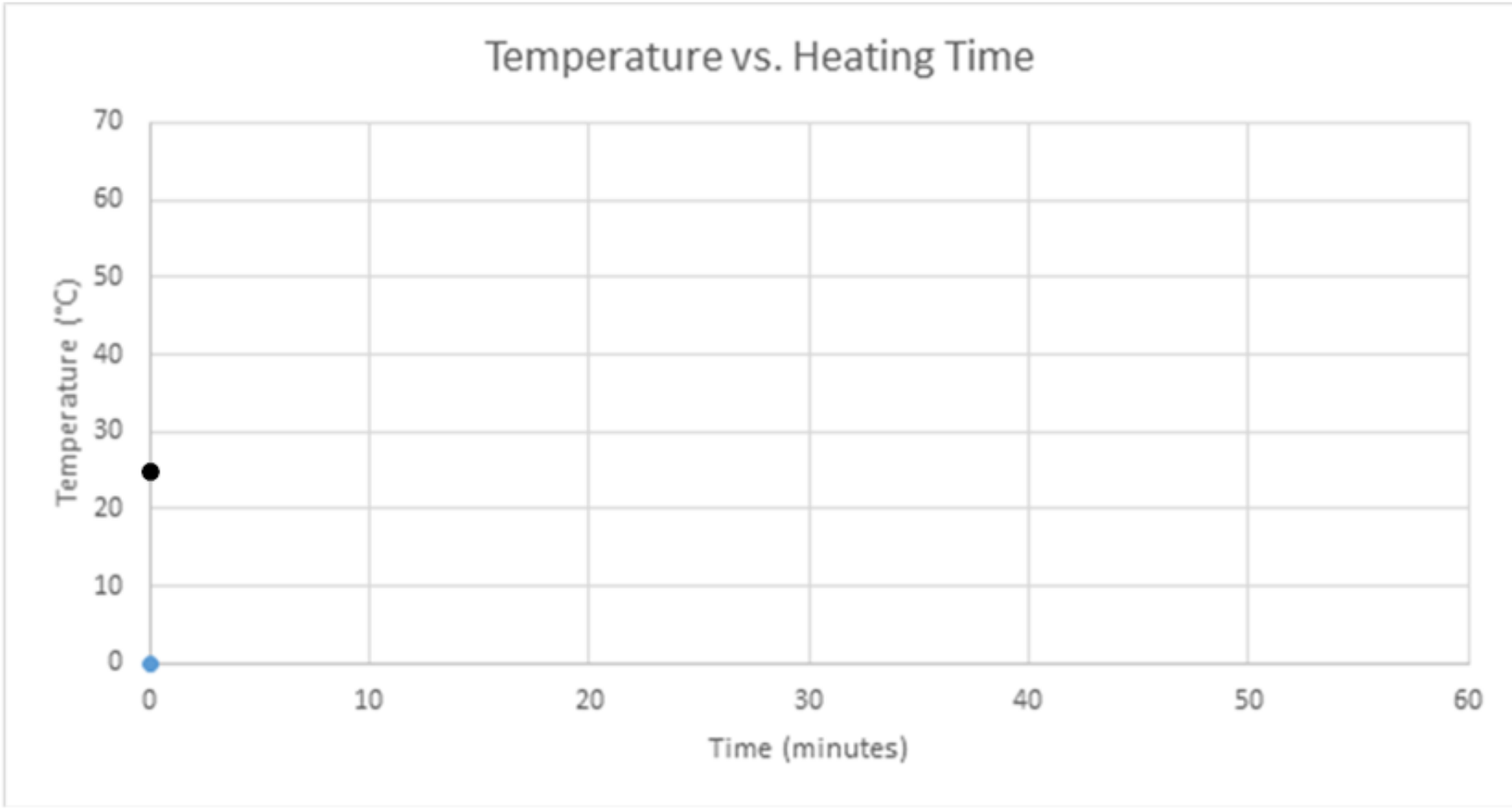
Unit 2: Heat and Energy in the Earth's Systems

L4: I Demand Representation

Guiding Question: Explain how a steep specific heat graph compares to a specific heat graph with a small slope.

- **Do Now:** Calculate the amount of calories I would need to remove from 62 g of aluminum in order to cool it down by 7°C. $C_{aluminum}$=0.215cal/g°C

Time (minutes)	Air (°C)	Water (°C)	Sand (°C)	Metal (°C)
0 (initial T)	25	25	25	25
15.0	28.9	26.2	30	35
30.0	32.5	27.5	35	45
45.0	36.2	28.8	40	55
60.0	40	30	45	65



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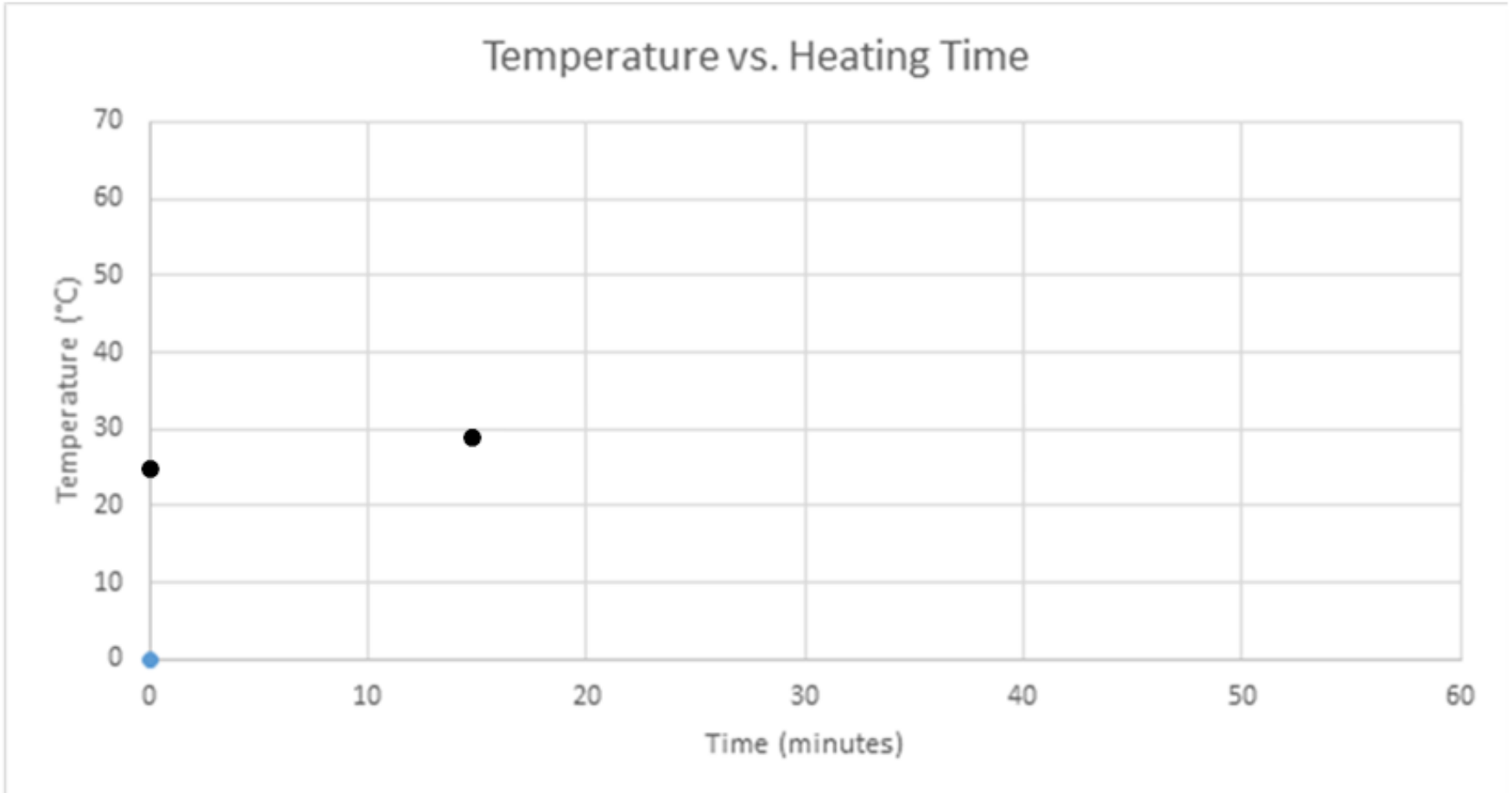

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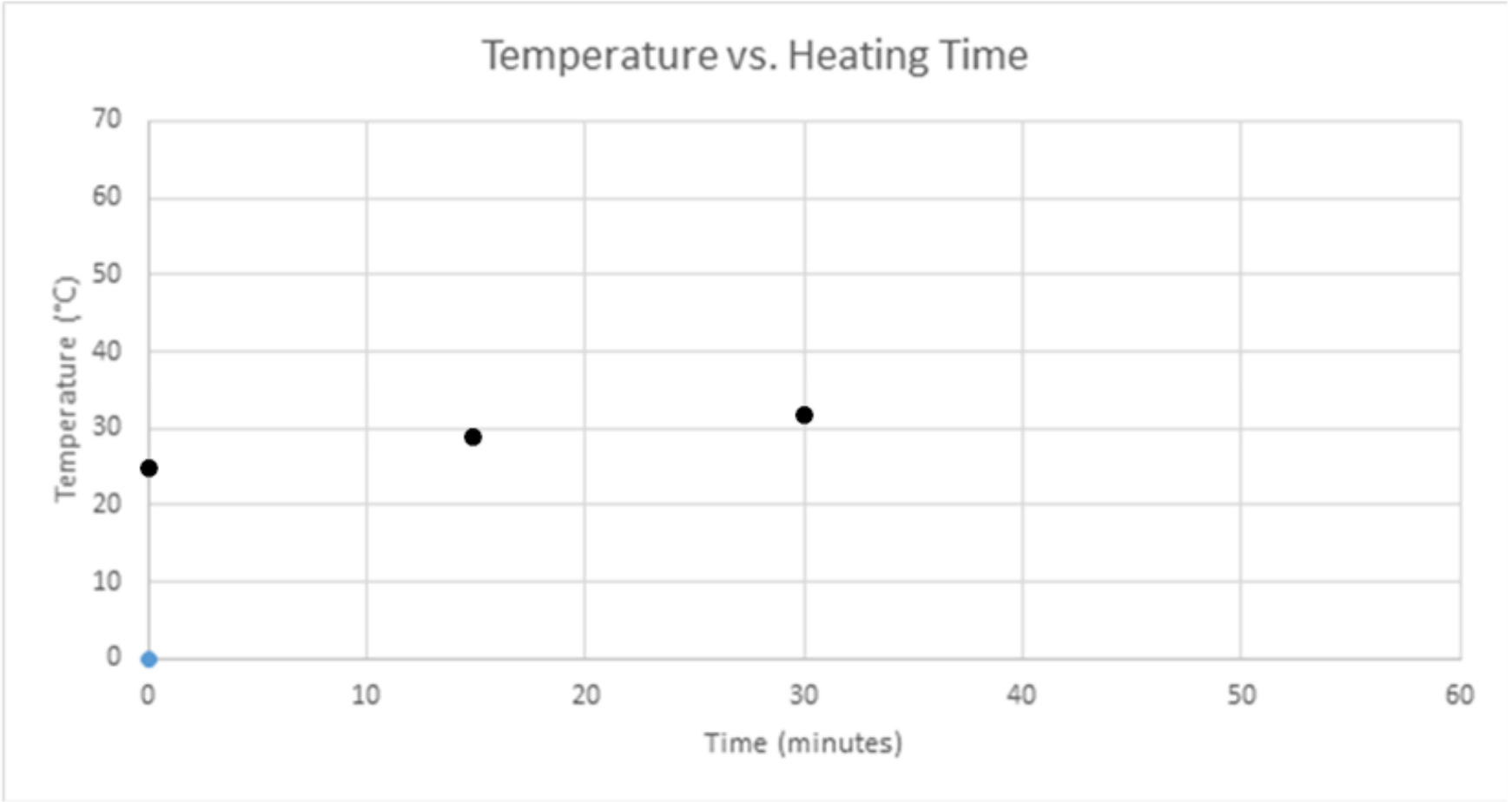

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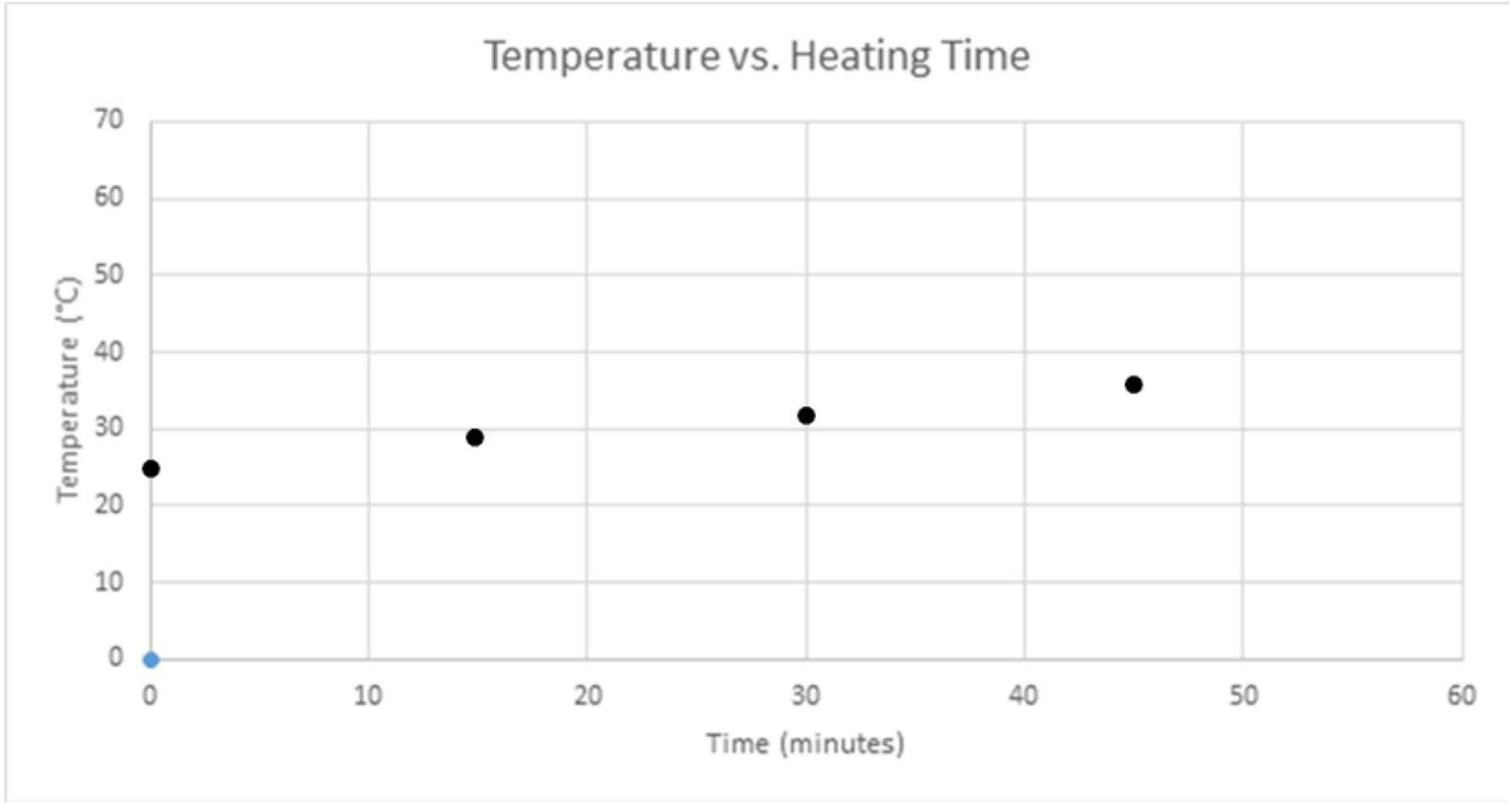

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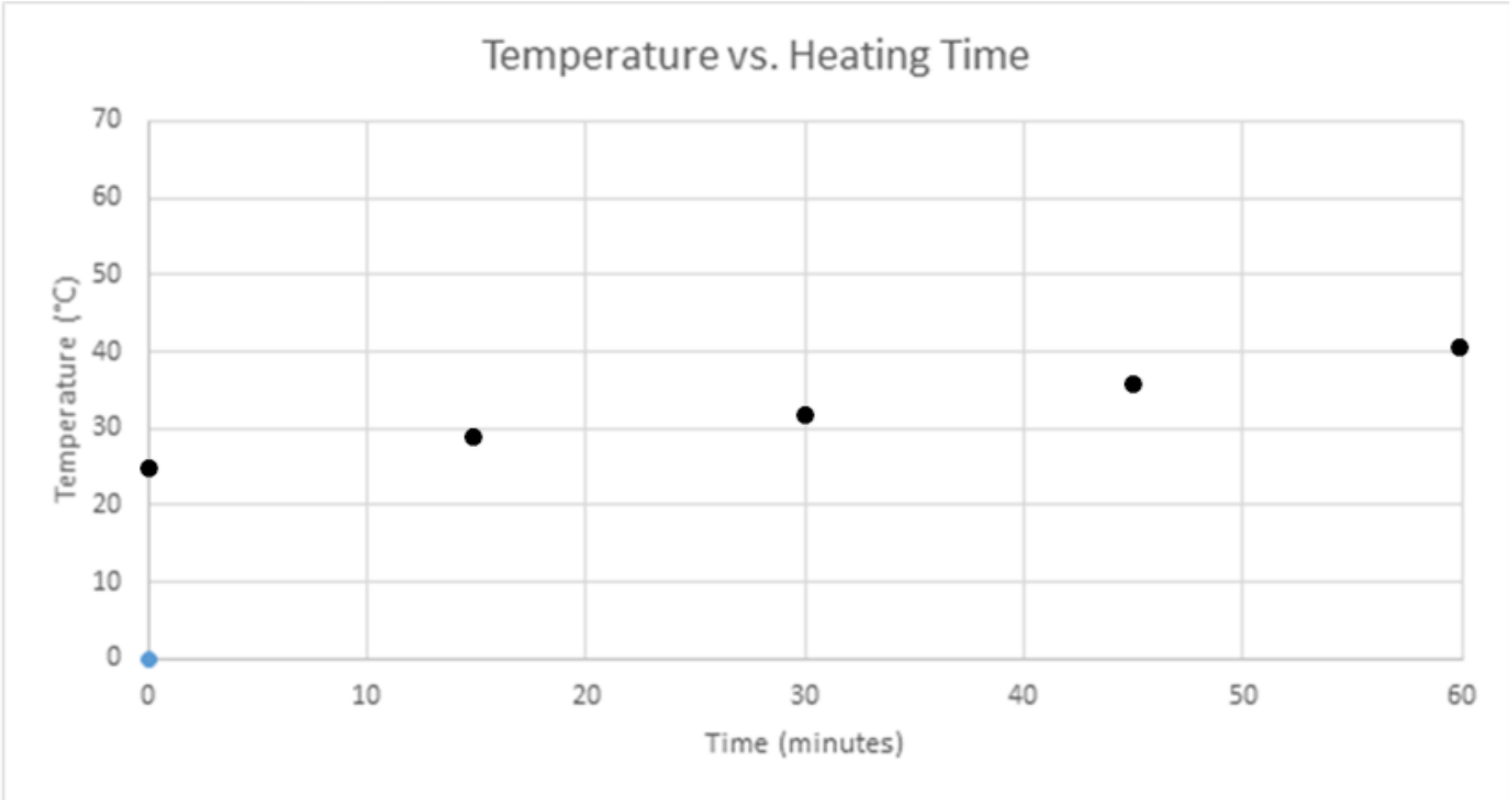

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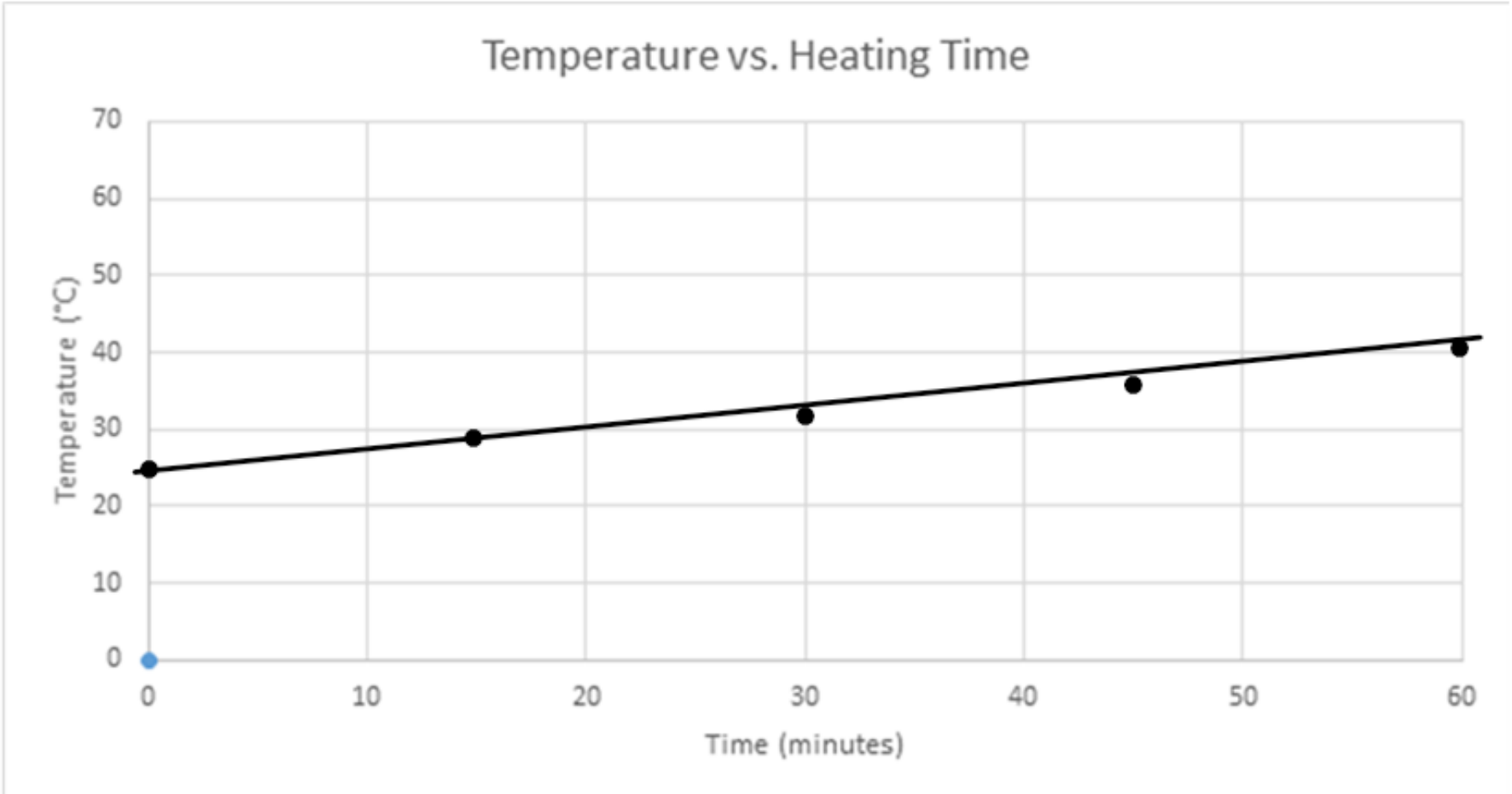

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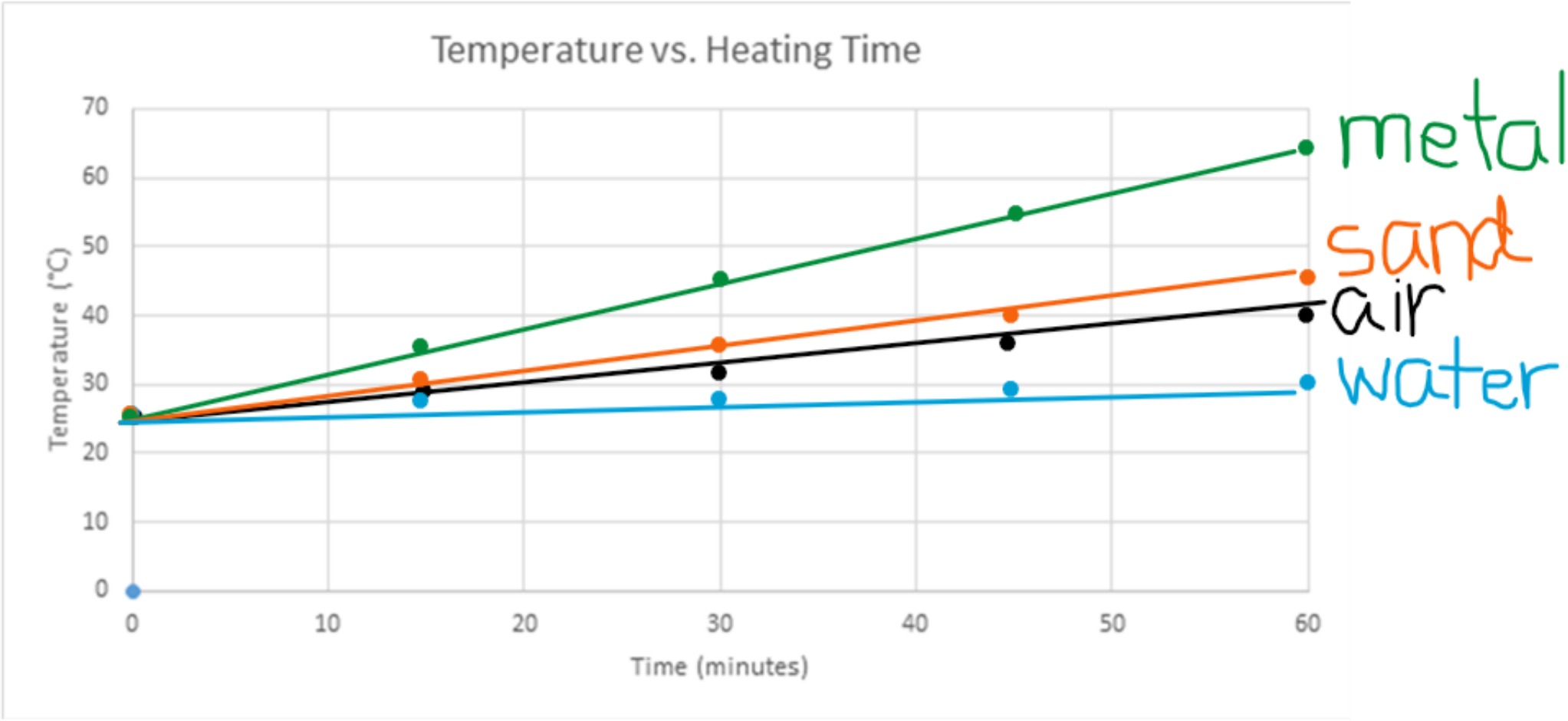

Notes

- You can determine the specific heat of a substance by graphing how the temperature of a known amount of substance changes over time.
  - The steeper the slope of the line, the **lower** the specific heat capacity because the temperature is changing more quickly.

Notes

- A slope that is **less steep** indicates that the temperature is changing **slowly**. This means that the substance requires a greater amount of energy to increase its temperature and thus has a **higher** specific heat.

Closure

- Homework #5 Due on Friday
- Quiz on Friday
- Quiz Review 1 Due on Friday
- Workbook 2.1 Due on Friday